

AMENDMENT TO THE CLAIMS

1. - 17. (Cancelled)

18. (New) An isolated protein comprising an amino acid sequence as set forth in SEQ ID NO:5 or conservative substitutions thereof, wherein said protein is capable of inducing an allergic reaction to latex in a person sensitized to said protein.

19. (New) The protein of claim 18, comprising an amino acid sequence as set forth in SEQ ID NO:5.

20. (New) The protein of claim 18, having an amino acid sequence as set forth in SEQ ID NO:5.

21. (New) A peptide comprising a biologically active portion of the protein of claim 18, wherein said peptide is capable of inducing an allergic reaction in a person sensitized to said protein.

22. (New) An isolated nucleic acid molecule encoding the protein of claim 18.

23. (New) An isolated nucleic acid molecule encoding the peptide of claim 21.

24. (New) The nucleic acid molecule of claim 22, comprising the nucleotide sequence of SEQ ID NO:1.

25. (New) An isolated nucleic acid molecule comprising a nucleotide sequence encoding a protein comprising an amino acid sequence as set forth in SEQ ID NO:2.

26. (New) A vector comprising the nucleic acid molecule of any of claims 22-25.

27. (New) The vector of claim 26, wherein said vector is an expression vector.

28. (New) A host cell transfected with the vector of claim 27.

29. (New) The host cell of claim 28, wherein the organism of said host cell is *Escherichia coli*.

30. (New) A method of expressing a protein comprising the step of culturing the isolated host cell of claim 28 under conditions in which said nucleic acid molecule is expressed, thereby expressing said protein.

31. (New) A method for identifying a compound capable of binding to the protein of claim 18, said method comprising the steps of:

(a) contacting said protein, or a cell expressing said protein, with a test compound under conditions suitable for binding; and

(b) detecting binding of the test compound to said protein.

32. (New) A method for identifying a compound capable of binding to the nucleic acid molecule of claim 22, said method comprising the steps of:

(a) contacting said nucleic acid molecule with a test compound under conditions suitable for binding; and

(b) detecting binding of the test compound to said nucleic acid molecule.

33. (New) An isolated protein capable of inducing an allergic reaction in a person sensitized to said protein, wherein said protein, further, has a molecular weight of about 42,000 Dalton, has an isoelectric point of about 4.7, binds with IgE of patients sensitized to the protein and comprises an amino acid sequence as set forth in SEQ ID NO:5 or conservative substitutions thereof.

34. (New) A method of producing the protein of claim 18, said method comprising the steps of:

- a) centrifuging latex to obtain the bottom fraction;
- b) freeze-thawing the bottom fraction to obtain latex B-serum; and
- c) isolating and purifying said protein from the B-serum obtained in step (b).

35. (New) The method of claim 34, wherein the isolation and purification of said protein are carried out via a series of chromatographic separations.

36. (New) The method of claim 35, wherein said chromatographic separations comprise ion exchange chromatography or gel filtration.

37. (New) An antibody that selectively binds to the protein of claim 18.

38. (New) The antibody of claim 37, wherein said antibody is a monoclonal antibody.

39. (New) The antibody of claim 37, wherein said antibody is a polyclonal antibody.

40. (New) A method for producing a protein in recombinant form, said method comprising the steps of:

(a) inserting the nucleic acid molecule of claim 22 into an appropriate vector; and

(b) inducing the vector to express said recombinant protein.

41. (New) The method of claim 40, wherein the vector is a microorganism, a plant or an animal.

42. (New) The method of claim 41, wherein the microorganism is a bacterium, a virus or a yeast.

43. (New) The method of claim 42, wherein the bacterium is *Escherichia coli*.

44. (New) The method of claim 40, wherein, in step (b), said vector is exposed to an inducer.

45. (New) The method of claim 44, wherein said inducer is isopropyl thiogalactoside (IPTG).

46. (New) An immunoassay for the presence of antibodies to allergenic latex protein in a sample, said immunoassay comprising the steps of:

- (a) providing the protein of claim 18;
- (b) reacting a sample of antibodies with said protein; and
- (c) detecting a reaction between said protein and said sample.

47. (New) A method of providing immunotherapy for a patient who is susceptible to an allergic reaction to latex comprising administering to the patient an immunotherapeutically effective amount of the antibody of claim 37.